

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT
"RENEWAL"

PERMITTEE

Deluxe Financial Services, Des Plaines
Attn: Mr. Stephen J. Norris
1600 East Touhy Avenue
Des Plaines, Illinois 60018

<u>Application No.:</u> 93020005	<u>I.D. No.:</u> 031063AFT
<u>Applicant's Designation:</u> PLANT#0251	<u>Date Received:</u> March 3, 2005
<u>Subject:</u> Tinters, Plate Setters, and Presses	
<u>Date Issued:</u> September 9, 2005	<u>Expiration Date:</u> September 9, 2010
<u>Location:</u> 1600 East Touhy Avenue, Des Plaines	

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of 42 non-heatset web lithographic presses, 37 sheetfed non-heatset lithographic presses, 3 flexographic printing presses, 9 paper tinting units, 8 paper plate-making units, UV lithographic web press, and 2 gas-fired boilers pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. This federally enforceable state operating permit is issued:
 - a. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 25 tons/year for volatile organic material (VOM)). As a result the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
 - b. This federally enforceable permit is issued to limit potential flexographic printing emissions of VOM to less than 25 tons/yr, therefore, the flexographic presses are not subject to the requirements of 35 Ill. Adm. Code Section 218.401 pursuant to 218.402(a).
 - c. To limit the emissions of VOM from the source to less than 25 tons/year. As a result, the source is excluded from the requirements of 35 Ill. Adm. Code Part 205, Emission Reduction Market System. The maximum emissions of this source, as limited by the conditions of this permit are described in Attachment A.
 - d. Prior to initial issuance, a draft of this permit has undergone a public notice and comment period.
 - e. This permit supersedes all operating permits issued for this location.

2. The lithographic printing presses are subject to the emission limitations and control requirements of 35 Ill. Adm. Code 218.407 and shall comply with the following requirements:

a. Non-heatset web presses:

i. The VOM content of the as-applied fountain solution is 5 percent or less, by volume, and the as-applied fountain solution contains no alcohol.

b. Non-heatset sheet-fed presses:

i. The VOM content in the as-applied fountain solution is 5 percent or less, by volume.

c. Any lithographic printing presses:

i. The VOM content of the as-used cleaning solution is less than or equal to 30 percent, by weight; or

ii. The VOM composite partial vapor pressure of the as-used cleaning solution is less than 10 mmHg at 20°C (68°F).

d. The VOM containing cleaning materials, including used cleaning towels, associated with any lithographic printing line may not be kept, stored or disposed of in any manner other than in closed containers.

3a. Emissions of volatile organic material, VOM, and operation of the 42 non-heatset web offset lithographic presses (includes 32 presses from Construction Permit 04110041) and UV lithographic web press shall not exceed the following limits:

<u>Material</u>	<u>VOM Usage</u>		<u>VOM Emissions</u>	
	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>	<u>(Lbs/Mo)</u>	<u>(Tons/Yr)</u>
Ink	2.16	14.4	220	0.72
Fountain Solution	0.27	1.8	540	1.8
Clean-Up Solvent	2.888	19.3	2,888	9.65
			Total:	12.17

These limits define the potential emissions of VOM and are based on maximum material usage, VOM content for each individual ink, fountain solution and solvent, 95 percent ink retention, and 50 percent retention of the clean up solvents in rags stored in closed containers that are sent off site if vapor pressure is less than 10 mmHg at 68°F. Compliance with annual limits shall be determined from a running total of 12 months of data.

b. Emissions of volatile organic material, VOM, and operation of the 37 sheetfed non-heatset lithographic presses (includes 10 presses from Construction Permit 04110041), shall not exceed the following limits:

<u>Material</u>	<u>VOM Usage</u>		<u>VOM Emissions</u>	
	<u>(Lb/Mo)</u>	<u>(Lb/Year)</u>	<u>(Lb/Mo)</u>	<u>(Tons/Yr)</u>
Non-Heatset Ink	1,392	9,280	69.6	0.232
Fountain Solution	199	1,322	198.3	0.661
Clean-Up Solvent	1,381	9,204	691.0	2.301
Minus Waste Shipped Off-Site	(129.6)	(1,086)	<u>(129.6)</u>	<u>(0.543)</u>
		Total:	829.3	2.651

These limits define the potential emissions of VOM and are based on maximum material usage, VOM content for each individual ink, fountain solution and solvent, and material balance. A credit of 50% VOM retention may be used if cleaning solvents have vapor pressure less than 10 mmHg at 68°F and used cleaning towels are stored in closed containers and sent off-site. Emission reduction credit is given to approximately 27% of the high VOM clean up solvent which remains as liquid hazardous waste (6 lbs VOM/gallon) and is shipped off site for disposal. Compliance with annual limits shall be determined from a running total of 12 months of data.

- c. Emissions of volatile organic material, VOM, and operation of the 3 flexographic presses shall not exceed the following limits:

<u>Material</u>	<u>VOM Usage</u>		<u>VOM Emissions</u>	
	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>	<u>(Lb/Mo)</u>	<u>(Tons/Yr)</u>
Ink	0.29	1.92	580	1.92
Clean Up-Solvent	0.045	0.30	<u>90</u>	<u>0.30</u>
		Total	670	2.22

These limits define the potential emissions of VOM and are based on maximum material usage and VOM content for each individual ink and solvent. Compliance with annual limits shall be determined from a running total of 12 months of data.

- d. Emissions of volatile organic material, VOM, and operation of the 7 paper tinting units shall not exceed the following limits:

<u>Material</u>	<u>VOM Usage</u>		<u>VOM Emissions</u>	
	<u>(Tons/Mo)</u>	<u>(Tons/Yr)</u>	<u>(Lb/Mo)</u>	<u>(Tons/Yr)</u>
Ink	0.4	2.64	789	2.63
Clean Up-Solvent	0.03	0.11	<u>50</u>	<u>0.11</u>
		Total	839	2.74

These limits define the potential emissions of VOM and are based on maximum material usage and VOM content for each individual ink and solvent. Compliance with annual limits shall be determined from a running total of 12 months of data.

- e. Emissions of volatile organic material, VOM, and operation of the 8 paper plate-making units shall not exceed the following limits:

<u>Material</u>	<u>Usage</u>		<u>VOM Emissions</u>	
	<u>(Per Mo)</u>	<u>(Per Yr)</u>	<u>(Lb/Mo)</u>	<u>(Tons/Yr)</u>
Toner	306 Gals	3,060 Gals	900	4.5

These limits define the potential emissions of VOM and are based on maximum material usage and maximum VOM content. Emission reduction credit is given to approximately 56% of the toner which remains as liquid hazardous waste (6 lbs VOM/gallon) and is shipped off site for disposal. Compliance with annual limits shall be determined from a running total of 12 months of data.

- f. Emissions from and operation of the 2 gas fired boilers (12.554 and 10.461 mmBtu/hour) shall not exceed the following limits:

<u>Total Max. Firing Rate (mmBtu/Hr)</u>	<u>Pollutant</u>	<u>Emission Factor</u>	<u>Emissions</u>	
		<u>(Lb/mmBtu)</u>	<u>(Tons/Month)</u>	<u>(Tons/Year)</u>
23	NO _x	0.098	1.0	9.9
	CO	0.082	0.83	8.3
	PM	0.0075	0.08	0.8
	VOM	0.0054	0.06	0.6
	SO ₂	0.0006	0.006	0.06

These limits define the maximum emissions of NO_x, CO, PM, SO₂, and VOM and are based on standard AP-42 emission factors and continuous operation (8,760 hours/year). Compliance with annual limits shall be determined from a running total of 12 months of data.

4. The emissions of Hazardous Air Pollutants (HAPs) as listed in Section 112(b) of the Clean Air Act shall not equal or exceed 10 tons per year of any single HAP or 25 tons per year of any combination of such HAPs, or such lesser quantity as USEPA may establish in rule which would require the Permittee to obtain a CAAPP permit from the Illinois EPA. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not triggering the requirement to obtain a CAAPP permit from the Illinois EPA.
- 5a. Within 90 days of a written request from the Illinois EPA the Permittee shall submit data on the volatile organic material content of the representative inks as applied determined by laboratory analysis in accordance with the 35 Ill. Adm. Code Section 218.105.
- b. The submitted data shall include: the VOM content of the inks, a justification of why these are representative, and a description of the sampling procedures, and documentation for the analysis.
- c. The Illinois EPA may provide additional time for the performance of this testing upon request from the Permittee which shows that it is not feasible to perform representative testing within 90 days.

- 6a. Pursuant to 35 Ill. Adm. Code Section 218.404 (b) owner or operator of a flexographic and rotogravure printing shall collect and record all of the following information each year for each printing line and maintain the information at the source for a period of three years:
- i. The name and identification number of each coating and ink as applied on each printing line.
 - ii. The VOM content and the volume of each coating and ink as applied each year on each printing line.
 - iii. On and after a date consistent with Section 218.106 of this Part, the owner or operator of a flexographic printing line exempted from the limitations of Section 218.401 of this Part because of the criteria in Section 218.402 of this Part shall notify the Illinois EPA of any record showing that total maximum theoretical emissions of VOM from all flexographic printing lines exceed 90.7 mg (100 tons) in any calendar year before the application of capture systems and control devices by sending a copy of such record to the Illinois EPA within 30 days after the exceedance occurs.
- b. The Permittee shall maintain monthly records of the following items pursuant to 35 Ill. Adm. Code 218.411:
- i. The name and identification of each batch of fountain solution prepared for use on one or more lithographic printing lines, the lithographic printing line(s) or centralized reservoir using such batch of fountain solution, and the applicable VOM content limitation for the batch;
 - ii. Date and time of preparation and each subsequent modification of the batch of fountain solution;
 - iii. Volume and VOM content of each component used in, or subsequently added to, the fountain solution batch;
 - iv. For fountain solutions to which VOM is added at the source with automatic feed equipment, determine the VOM content of the as-applied fountain solution based on the setting of the automatic feed equipment which makes additions of VOM up to a pre-set level. The equipment used to make automatic additions must be installed, calibrated, operated and maintained in accordance with manufacturer's specifications.
 - v. Calculated VOM content of the as-applied fountain solution;
 - vi. The name and identification of each cleaning solution;
 - vii. Date and time of preparation, and each subsequent modification, of the batch of cleaning solution;

- viii. The VOM content of each cleaning solvent in the cleaning solution;
 - ix. The total amount of each cleaning solvent and water (or other non-VOM) used to prepare the as-used cleaning solution;
 - x. The VOM content of the as-used cleaning solution, with supporting calculations.
 - xi. Amount of each ink, fountain solution, and clean up solvent used in the non heatset web offset, sheetfed non heatset lithographic presses, and UV lithographic web press (lb or gal/mo and gal or ton/yr);
 - xii. Amount of each ink and clean up solvent used in the flexographic presses and paper tinting units (lb or gal/mo and gal or ton/yr);
 - xiii. Amount of each toner used in the paper plate-making units (lb or gal/mo and gal or ton/yr);
 - xiv. VOM content of each ink, fountain solution, and clean up solvent used in the non heatset web offset, sheetfed non heatset lithographic presses, and UV lithographic web press (percent weight of VOM or lb VOM/gal);
 - xv. VOM content of each ink and clean up solvent used in the flexographic presses and paper tinting units (percent weight of VOM or lb VOM/gal);
 - xvi. VOM content of each toner used in the paper plate-making units (percent weight of VOM or lb VOM/gal);
 - xvii. VOM emissions from all equipment (lb/mo and ton/yr);
 - xviii. Amount of VOM containing waste shipped off-site (lb/mo and lb/year);
 - xix. An analysis of the waste shipments showing the VOM content of the most recent waste analysis (% by weight); and
 - xx. VOM and HAP emissions with supporting calculations (tons/mo and tons/yr).
- c. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours

so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.

7. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or violation and efforts to reduce emissions and future occurrences.
8. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or a continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

It should be noted that 32 web and 10 sheetfed non-heatset lithographic printing presses have been added to this permit from Construction Permit 04110041.

If you have any questions on this, please call Randy Solomon at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

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cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the commercial printing facility operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels, e.g., 25 tons/year for volatile organic material (VOM) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled and control measures are more effective than required in this permit.

<u>Equipment</u>	<u>VOM</u> <u>(Tons/Yr)</u>	<u>HAPs</u>		<u>NO_x</u> <u>(Tons/Yr)</u>	<u>CO</u> <u>(Tons/Yr)</u>	<u>PM</u> <u>(Tons/Yr)</u>
		<u>Combined</u> <u>(Tons/Yr)</u>	<u>Single</u> <u>(Tons/Yr)</u>			
42 Web Presses	12.17					
37 Sheetfed Presses	2.65					
3 Flexographic Presses	2.22					
9 Tinting Units	2.74					
8 Plate-Makers	4.5					
2 Boilers	<u>0.6</u>			<u>9.9</u>	<u>8.3</u>	<u>0.8</u>
Totals:	24.9	<u>< 25</u>	<u>< 10</u>	9.9	8.3	0.8

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